

City of Newport Beach

Water Quality/Coastal Tidelands Committee Minutes

Date: June 12, 2014

Time: 3:00 p.m.

Location: Newport Coast Conference Room, 2nd Floor, Bay E

1. Welcome/Self Introductions

Committee Members present:

Chairwoman/Council Member Nancy Gardner

Dennis Baker

Carl Cassidy

Lou Denger

Fred Galluccio

Mike Melby

Mike Henn/Council Member

Guests present:

Jim Mosher, resident

Jeff Coffman, Clean Green Technology

Nancy and Jack Skinner, S.P.O.N.

Philip Bettencourt, Bettencourt & Associates

Darrel Ferguson, Surfrider Foundation

Wajih Malki, resident

Monika Galluccio, resident

Jenna Voss, Orange County Public Works

Mary Anne Skorpanich, Orange County Public Works

Staff present:

Dave Kiff, City Manager

Dave Webb, Director of Public Works

Bob Stein, Assistant City Engineer

John Kappeler, Water Quality Manager

Chris Dickel, Public Works Intern

Shari Rooks, Public Works Specialist

The agenda for the Water Quality/Coastal Tidelands Committee was posted at 8:12 am on June 5, 2014, in the binder located in the entrance of the Council Chambers at 100 Civic Center Drive.

2. Approval of Previous Meeting's Minutes

The May 8th meeting minutes were approved with no corrections.

3. Old Business

a. Bay and Ocean Bacteriological Test Results

John Kappeler reviewed recent water quality test results within Newport Bay and along the ocean shoreline.

b. 2014 Committee Goals and Priorities

John Kappeler updated the Committee on the street sweeping and catch basin cleaning currently being performed by the larger Home Owner Associations (HOAs) in the City.

- There are 164 HOAs in the City and approximately two-thirds of them are public streets and are swept by the City. The remaining one-third are private streets and swept by private communities.
- Newport Coast, One Ford Road and Big Canyon were contacted and asked about their street sweeping programs and at the same time we looked at catch basin cleaning. One Ford Road sweeps weekly. Big Canyon sweeps weekly. All of Newport Coast is swept anywhere from weekly, twice a month or sometimes monthly. Some of the smaller HOAs have not yet responded.
- There are approximately 4000 catch basins in the City and 3250 of them are maintained by the City and approximately 750 are private. The City cleans all of their catch basins annually. Only 10 to 20 percent of the HOAs clean their catch basins. Currently approximately 85 percent of the catch basins in the City are cleaned.
- **Mike Henn** suggested the Committee take the catch basin cleaning issue to Council and recommend the “soft approach” offering to let the HOAs piggy-back on the City’s contract and have our contractor clean their catch basins at a cost effective price.
- **Dennis Baker** agreed and made a formal proposal that the Committee take the “soft approach” to Council first, noting that per the City Attorney’s office the City had the right to mandate that HOAs clean their catch basins.
- **Jack Skinner** voiced concern about the fact that many of the Costa Mesa streets upstream of the Arches Bridge are not swept and suggested our Council discuss the issue with the City of Costa Mesa. **Nancy Gardner** suggested we first needed to do everything possible regarding enforcing street sweeping and catch basin cleaning in Newport before we approached Costa Mesa to ask for their cooperation.

ACTION: John Kappeler to find out how much our contractor charges to clean our catch basins.

4. New Business

a. National Pollutant Discharge Elimination System (NPDES) Draft Fifth Term Permit

- **Jenna Voss**, from the County of Orange, gave the Committee an update on the County’s review and comments on the draft fifth term NPDES permit. (See attached presentation).
- We are currently in negotiations for a fifth term stormwater permit issued by the Santa Ana Regional Water Quality Control Board. Orange County received its first National Pollutant Discharge Elimination System (NPDES) permit in 1990.
- In the fourth term permit the land development program shifted from a “treat and release” paradigm to a “low impact development” viewpoint requiring more onsite retention.
- Significant progress has been made in eliminating bacteria on our beaches and nutrients in our water during dry weather through diversions and conservation measures. Progress in reducing copper in urban runoff from vehicle brakes (SB346 Kehoe) whereby no more than 0.5% Cu by weight will be permitted in brake pads by 2025. Recognition of progress and successes should be included in policy.

- Policy regarding existing inspection schedules may need to be changed. Do we really have to continue inspection frequencies for locations we have inspected for over 20 years with no violations? Do we really need to inspect all construction projects? Something simple like a flagpole or a brick wall should not require an inspection and staff will clarify that policy.
- **Dave Kiff** voiced concern regarding the inspection schedule frequency being reduced county-wide. **John Kappeler** explained that they are “massaging” the prioritization, not the facilities or how many times they would need to be inspected. There will be no change for Newport with regard to inspections.
- **Dave Kiff** also asked whether HOAs were considered sources or point sources because they drain into the municipal system. They are not, despite the fact that they connect directly to our system. There are different land uses that our permit is not required to regulate, such as school districts, college campuses and military bases. Although they connect to our system, they are basically considered “white holes” with regard to the permit.
- **Dennis Baker** asked if there is any talk on the horizon within the NPDES process about going into in-filled areas like Newport Beach now and looking at opportunities for retrofitting – a simple example would be landscaping of gardens. Currently retrofitting is not one of the requirements.

b. Upper Newport Bay Watershed Projects

- **Mary Anne Skorpanich**, from the County of Orange, gave a presentation and update on various water quality projects (including selenium) in the Upper Newport Bay Watershed. (See attached presentation).
- **The Newport Bay Executive Committee** is comprised of various entities, i.e., (Federal, County, City, Irvine Ranch Water District (IRWD), Orange County Flood Control, Caltrans, The Irvine Company and the cities of Tustin, Irvine and Newport Beach) that contribute time and funds into projects that improve bay water quality. Mary Anne Skorpanich is the staff liaison for that committee.
- The selenium level in the Bay is well below all the standards. The standards are different for fresh water - areas like San Diego Creek, Santa Ana-Delhi Channel and Big Canyon Wash.
- The Cienega Project built by the IRWD and the City of Irvine is still at the pilot scale and has been found to be effective in removing selenium, but not very cost effective because it takes up a large amount of land area and is very expensive to operate.
- Over \$10M in funding has been committed thus far towards the Best Management Practices (BMP) Strategic Plan consisting of three major watershed projects. The Big Canyon project is one of them, along with the Peters Canyon Pipeline and the Santa Ana-Delhi Channel Diversion Project.
- The Peters Canyon Pipeline’s goals include: capturing point source discharges containing selenium before they reach receiving waters, capturing non-point source flows, providing offset credits for point source discharges and removing nutrients, bacteria, pesticides, etc. This project is in the design phase and it’s anticipated that the construction contract will be awarded in June 2015. This project will remove the largest amount of selenium per year (230 pounds per year.)
- **Lou Denger** asked how much flow will be diverted from Peters Canyon and was told that they will be diverting the water coming from the municipal storm drain system

before it enters Peters Canyon and putting it into a pipeline that runs parallel to Peters Canyon.

- **Bob Stein** asked when the County expected to have written assurances from the Environmental Protection Agency (EPA) for the Peters Canyon Pipeline. The EPA does not review the work plan but the Newport Bay Executive Committee is working closely with the Regional Board to help and support them to rewrite the regulations. Those regulations will have an implementation plan and that plan will work much like the BMP Strategic Plan. The plan will state these are the first projects that the Regional Board is confident will work to reduce selenium, that we will implement them and continue to monitor once built to see how they are affecting fish and birds.
- **Bob Stein** asked the Committee members for a decision as to whether they wanted to go ahead and do a separate agreement with the EPA and get our work plan for the Big Canyon project blessed as the City does not have any outstanding issues. The Regional Board would prefer to have all the projects tied together, but the City has been ready to proceed since 2012.
- **Dennis Baker** asked if there were any negative reasons why the Committee shouldn't recommend to the City Council that we move forward with our project and write a simple TMDL for Big Canyon. **Dave Webb** stated that the Regional Board likes the City's project and our work plan and has encouraged us to keep moving forward. No negative reasons were presented and City Manager, **Dave Kiff**, offered to work with **Dave Webb** and **Bob Stein** to get the kind of approval Bob is seeking more quickly.
- **Jack Skinner** asked if the new EPA stringent aquatic selenium standard requirement of 5 micrograms per liter will impact any of the projects. The objective of the Newport Bay Executive Committee is to come up with a new regulation in terms of the TMDL that focuses on fish tissue and bird eggs so we are altering measures within the water and the new TMDL will be delivered to the Regional Board in September. In December it will be taken to the Board for adoption and will subsequently have to go to the State Water Board.
- The Santa Ana-Delhi Diversion project will be in the channel itself and will not divert all the flow. It will be taking some of the flow to the sanitation district for onsite treatment. There will be 2 miles of pipeline built and it will remove approximately 40 pounds of selenium per year. The diverted water will go to the groundwater replenishment system to be reused. The partners in this project are the cities of Santa Ana, Newport Beach and Costa Mesa.
- Biota monitoring of the fish tissue and bird eggs in the Watershed began in 2010.

ACTION: **Mary Anne Skorpanich** will get back to the Committee with the following information:

1. Volume of water to be diverted in the Peters Pipeline project
2. Name of contact at the EPA

5. Public Comments on Non-Agenda Items

Jim Mosher shared information regarding the upcoming Science of Sustainability Symposium series to be hosted by the Newport Bay Conservancy. The first in the series will be held Saturday, June 28, 2014 from 8:30 am until noon at the Back Bay Science Center.

Darrel Ferguson asked about the Army Corps' Semeniuk Slough project and how far out the line went because there may be a future diversion needed for the buildup at the mouth of the Santa Ana River. The line extended 1,500 feet.

Monika Galluccio shared with the Committee how successful the investment in solar energy has been in Germany and Nancy Gardner said she would mention that to the Environmental Quality Affairs Committee.

6. Topics for Future Agendas

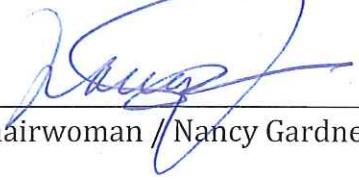
- (a) Bacteriological Dry-Weather Runoff Gutter Study (Phase III)
- (b) Prop 84 ASBS Grant Program
- (c) Senate Bill – SB 1447
- (d) Eelgrass Program
- (e) Trash Project for Storm Drains
- (f) Harbor Commission Copper Report
- (g) Orange County Coastal Regional Sediment Management Plan
- (h) Sediment Quality Objectives (SQOs)
- (i) NPDES Fifth Term Draft Permit
- (j) Adopting a Natural Source Exclusion
- (k) Banning Ranch
- (l) Grey Water

7. Set Next Meeting Date

The next meeting date was set for July 10th, at 3 PM in the **Newport Coast Conference Room, Bay E, 2nd Floor**.

8. Adjournment

The meeting was adjourned at 4:55 pm.


Chairwoman / Nancy Gardner

Total Coliform (TC), Fecal Coliform (FC), Escherichia coli (ENT) Colony Forming Units / 100 ml Sample

| STATION | Location Description | 2/10/14 | 2/18/14 | 2/24/14 | 3/3/14 | 3/10/14 | 3/17/14 | 3/24/14 | 3/31/14 | 4/7/14 | 4/14/14 | 4/21/14 | 4/28/14 | 5/5/14 | 5/12/14 | 5/19/14 | 5/27/14 | 6/2/14 | 6/9/14 | |
|--------------------------------|---------------------------------|---------|---------|---------|--------|---------|---------|---------|---------|--------|---------|---------|---------|--------|---------|---------|---------|--------|--------|--------|
| NEWPORT BAY (Upper Bay) | | | | | | RAIN | | | | | | | | RAIN | | | | | | |
| BNB24 | Newport Dunes - Middle | TC | 100 | 30 | 720 | 4800 | >40 | >80 | >110 | 10 | 4400 | >320 | >170 | >740 | >20 | >95 | <10 | >280 | >30 | >50 |
| | FC | <10 | 150 | 180 | 20 | 10 | 80 | <10 | 390 | 230 | <10 | 640 | <10 | 10 | <10 | <10 | <10 | <10 | 10 | |
| | ENT | 8 | 10 | 80 | 130 | 20 | 4 | 8 | 4 | 68 | 20 | 2 | 4 | <2 | 30 | 2 | 4 | 2 | 6 | |
| BNB24 | Newport Dunes - West | TC | 20 | 30 | 580 | 9800 | >150 | 80 | >400 | 20 | >390 | >50 | >190 | 3000 | 70 | >80 | >60 | <10 | <10 | >120 |
| | FC | <10 | 270 | 150 | 40 | 10 | 360 | <10 | 190 | <10 | 20 | 120 | 10 | <10 | <10 | <10 | <10 | <10 | 50 | |
| | ENT | 58 | 8 | 84 | 130 | 20 | 6 | 10 | 6 | 110 | 46 | 20 | 6 | 2 | 6 | 10 | <2 | <2 | 10 | |
| | TC | 110 | 20 | >80 | >1210 | >260 | >220 | >40 | >30 | >10 | >50 | >3000 | >70 | >10 | >10 | >200 | >50 | >50 | >80 | |
| BNB24 | Newport Dunes - East | FC | <10 | 10 | 30 | 70 | 170 | 80 | 10 | 80 | <10 | 10 | 460 | 40 | 10 | <10 | 160 | 30 | <10 | |
| | ENT | 10 | 4 | 24 | 160 | 38 | 32 | 10 | 6 | 10 | 4 | <2 | 10 | 10 | <2 | 8 | 10 | 235 | 4 | |
| | TC | 60 | 40 | >130 | 3400 | >270 | >20 | >95 | >60 | 10 | >10 | >5600 | <10 | >10 | >200 | >20 | 8800 | >20 | >20 | |
| | FC | 20 | 70 | <10 | 200 | 160 | 10 | <10 | 20 | 10 | 10 | 930 | <10 | <10 | <10 | <10 | 440 | <10 | | |
| | ENT | 8 | 24 | 10 | 30 | 32 | 4 | 10 | 6 | 48 | 6 | 2 | 6 | 26 | 8 | <2 | 4 | <2 | 8 | |
| BNB25 | Vaughn's Launch | TC | 40 | NS | NS | NS | NS | NS | 20 | NS | >30 | NS | >10 | NS | >220 | >380 | >20 | NS | >20 | NS |
| | FC | 10 | NS | NS | NS | <10 | NS | 10 | NS | <10 | NS | 30 | 10 | <10 | NS | <10 | NS | <10 | NS | |
| | ENT | 38 | NS | NS | NS | NS | NS | 10 | NS | 10 | NS | 2 | NS | 10 | 48 | 2 | NS | 6 | NS | |
| BNB26 | Ski Zone | TC | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | |
| | FC | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | |
| | ENT | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | |
| BNB28 | North Star Beach | TC | 400 | <10 | 20 | 6000 | >420 | >60 | >70 | 60 | >20 | 30 | >20 | 1000 | <10 | >10 | <10 | <10 | >10 | |
| | FC | 260 | <10 | 70 | 40 | <10 | 10 | <10 | 10 | <10 | 10 | <10 | 10 | <10 | 70 | <10 | <10 | <10 | <10 | |
| | ENT | 66 | 4 | 4 | 5000 | 90 | 56 | 8 | 22 | 2 | 4 | 10 | 10 | 10 | 10 | 10 | <2 | 8 | <2 | |
| BNB30 | De Anza | TC | <10 | 10 | 20 | 9600 | 60 | 10 | <10 | 20 | <10 | 50 | 30 | <10 | >210 | 10 | >10 | <10 | >10 | |
| | FC | <10 | <10 | 10 | 160 | <10 | 10 | <10 | 10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | |
| | ENT | <2 | <2 | 8 | 120 | 10 | <2 | <2 | <2 | 2 | <2 | 4 | <2 | 4 | <2 | 4 | 4 | 4 | 4 | |
| BNB05 | Bayshore Beach | TC | 20 | 10 | 20 | 7800 | 20 | 10 | 30 | 110 | 50 | 30 | <10 | 50 | 30 | <10 | >30 | <10 | >20 | |
| | FC | <10 | <10 | 140 | <10 | <10 | <10 | <10 | <10 | 10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | |
| | ENT | <2 | 4 | 2 | 94 | 10 | 2 | 8 | 4 | 2 | 2 | 4 | <2 | 8 | <2 | 2 | 2 | 2 | 2 | |
| NEWPORT BAY TRIBUTARIES | | | | | | | | | | | | | | | | | | | | |
| CNBBCD | San Diego Creek - Campus Dr. | TC | >3800 | >2600 | >13000 | >2600 | >11000 | >1800 | >2600 | >1400 | >400 | >58000 | >1400 | >400 | >5000 | >600 | >500 | >800 | >700 | >130 |
| | FC | 80 | 60 | 40 | 3000 | >330 | 80 | 30 | 50 | 30 | <10 | 60 | 2000 | 50 | 10 | 20 | <10 | <10 | 10 | |
| | ENT | 26 | 72 | 88 | 4600 | 293 | 68 | 64 | 46 | 42 | 74 | 130 | >52 | 38 | 20 | 22 | 6 | 10 | 400 | |
| CNBSA | Santa Ana Delhi Channel | TC | 7700 | >2100 | >20000 | >72000 | >5400 | >770 | >4800 | >470 | >26000 | >1400 | >400 | >97000 | >33000 | >4100 | >2700 | >240 | >33000 | >14000 |
| | FC | 50 | 100 | 20 | NS | 80 | 10 | 10 | 10 | 10 | 130 | 30 | 40 | 250 | 50 | 60 | 20 | 1040 | <10 | |
| | ENT | 279 | 275 | 48 | 1000 | 600 | 44 | 170 | 46 | 170 | 120 | 88 | 130 | 170 | 228 | 230 | 150 | 160 | 400 | |
| CNBBBC | Big Canyon Creek | TC | >480 | >800 | >420 | NS | >380 | >600 | >250 | >3200 | >460 | >100 | >440 | >460 | >760 | >650 | >4000 | >5200 | >970 | |
| | FC | 50 | 100 | 20 | NS | 80 | 10 | 10 | 10 | 10 | 130 | 30 | 40 | 250 | 50 | 60 | 20 | 1040 | <10 | |
| | ENT | 66 | 78 | 100 | NS | 180 | 100 | 92 | 56 | 150 | '90 | 70 | 62 | 120 | 76 | 66 | 76 | 1000 | 32 | |
| CNBND | Backbay Drive Pipe | TC | >900 | >11000 | >5800 | >410 | >780 | >5600 | >7800 | >5000 | >3000 | >40000 | >990 | >600 | >1100 | NS | >1000 | NS | NS | |
| | FC | 30 | 50 | 120 | 40 | 10 | 40 | 190 | 300 | 210 | >40000 | 120 | 10 | <10 | NS | <10 | NS | NS | NS | |
| | ENT | 140 | 200 | 2600 | 234 | 74 | 190 | 600 | 232 | 86 | 1000 | 289 | 1000 | 1000 | NS | 8600 | NS | NS | NS | |
| NEWPORT SLOUGH | | | | | | | | | | | | | | | | | | | | |
| BNS01 | Lancaster Street & 61st Street | TC | NS | NS | NS | NS | NS | NS | >19000 | <10 | >20 | >330 | >10 | >10 | >50 | >40 | >30 | NS | NS | |
| | FC | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | <10 | <10 | <10 | <10 | <10 | |
| BNS02 | Lancaster Street & Canal Street | TC | NS | NS | NS | NS | NS | NS | >10000 | >30 | 10 | >10 | <10 | >30 | 10 | <10 | <10 | <10 | NS | |
| | FC | NS | NS | NS | NS | NS | NS | NS | <10 | 10 | 10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | NS | |
| | ENT | NS | NS | NS | NS | NS | NS | NS | 10 | 4 | 6 | 6 | 10 | 4 | 20 | 8 | 8 | <2 | NS | |

Health Care Agency / Environmental Health Newport Bay Bacteriological Monitoring Program
Total Coliform (TC), Fecal Coliform, Enterococcus (ENT) Colony Forming Units / 100 ml Sample

| STATION | Location Description | 2/3/14 | 2/10/14 | 2/18/14 | 2/24/14 | 3/3/14 | 3/10/14 | 3/17/14 | 3/24/14 | 3/31/14 | 4/7/14 | 4/14/14 | 4/21/14 | 4/28/14 | 5/5/14 | 5/12/14 | 5/19/14 | 5/27/14 | 6/2/14 | 6/9/14 |
|-------------------------|--------------------------|----------|---------|---------|---------|--------|---------|---------|---------|---------|--------|---------|---------|---------|--------|---------|---------|---------|--------|--------|
| NEWPORT BAY (Lower Bay) | | RAIN | | | | RAIN | | | | | | | | | RAIN | | | | | |
| BNB09 | 43rd Street Beach | TC 140 | 20 | 50 | 10 | >1340 | 190 | >30 | >110 | >10 | 60 | 10 | 10 | 100 | >10 | <10 | >230 | 80 | >10 | <10 |
| | | FC 10 | <10 | <10 | <10 | 30 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | 20 | <10 | <10 | <10 |
| | | ENT 26 | 10 | 2 | 8 | 20 | 20 | 2 | 6 | <2 | <2 | 2 | 6 | 2 | 2 | 2 | 8 | <2 | <2 | <2 |
| BNB10 | 38th Street Beach | TC >8600 | 10 | <10 | >820 | >720 | 80 | <10 | >200 | <10 | <10 | <10 | <10 | >290 | >10 | <10 | 10 | 100 | >20 | <10 |
| | | FC 330 | <10 | <10 | 10 | <10 | <10 | <10 | 10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| | | ENT 180 | 2 | 4 | 86 | 4 | 28 | <2 | 46 | 4 | 10 | <2 | 6 | 120 | 4 | 4 | <2 | 2 | 20 | <2 |
| BNB11 | 33rd Street Channel | TC >840 | >1420 | 40 | 80 | 270 | >210 | 10 | 110 | <10 | 30 | >360 | 80 | >60 | >40 | 10 | >30 | <10 | <10 | <10 |
| | | FC 70 | 50 | <10 | <10 | 10 | 20 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| | | ENT 10 | 56 | 8 | 4 | 4 | 84 | <2 | 22 | 2 | 6 | 10 | <2 | 64 | 32 | 10 | <2 | <2 | <2 | 2 |
| BNB32 | Lido Yacht Club Beach | TC <10 | 240 | <10 | 20 | 6000 | 30 | >10 | >21600 | <10 | <10 | >10 | <10 | 10 | >100 | 80 | <200 | <10 | <10 | 190 |
| | | FC <10 | <10 | 10 | <10 | 50 | <10 | <10 | 80 | <10 | <10 | <10 | <10 | 10 | <10 | 50 | <10 | <10 | <10 | 140 |
| | | ENT <2 | <2 | <2 | 4 | 28 | <2 | <2 | 1000 | 2 | <2 | 2 | <2 | 2 | 8 | <2 | 2 | <2 | 4 | 20 |
| BNB07 | Via Genoa Beach | TC 300 | 10 | 10 | 10 | 8600 | <10 | <10 | 10 | 10 | 20 | 30 | <10 | 30 | <10 | 10 | <10 | 10 | <10 | 10 |
| | | FC <10 | <10 | <10 | <10 | 10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| | | ENT 20 | <2 | <2 | 4 | 96 | 2 | <2 | <2 | 2 | <2 | 6 | <2 | 8 | <2 | 2 | <2 | 2 | <2 | <2 |
| BNB35 | Newport Blvd. Bridge | TC >1000 | >6800 | >1300 | >17000 | 880 | >8000 | >400 | >570 | 80 | >6200 | 10 | >95 | >70 | 70 | 40 | >230 | >2050 | 120 | 1270 |
| | | FC 130 | 180 | 130 | 1170 | 70 | 450 | <10 | 95 | <10 | 260 | <10 | 20 | <10 | <10 | <10 | <10 | 10 | 10 | 10 |
| | | ENT 24 | 250 | 32 | 2000 | 10 | 226 | 2 | 226 | <2 | 251 | 2 | 20 | <2 | 6 | <2 | 20 | 52 | 4 | 8 |
| BNB12 | Rhine Channel | TC <10 | 180 | 70 | 20 | >700 | 20 | 10 | >350 | 60 | 20 | <10 | 10 | 30 | >60 | 60 | 20 | <10 | <10 | 110 |
| | | FC <10 | <10 | <10 | <10 | 50 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| | | ENT <2 | <2 | <2 | 2 | <2 | <2 | <2 | 20 | <2 | 6 | <2 | 4 | 10 | 4 | <2 | <2 | <2 | <2 | <2 |
| BNB14 | 19th Street Beach | TC <10 | <10 | 260 | <10 | 4800 | <10 | 10 | 10 | 150 | 10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| | | FC <10 | <10 | 80 | <10 | 150 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| | | ENT <10 | <2 | 4 | <2 | 20 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| BNB15 | 15th Street Beach | TC 40 | >40 | <10 | 30 | 4600 | >440 | 40 | >60 | <10 | 30 | 10 | <10 | <10 | <10 | <10 | <10 | <10 | 150 | 10 |
| | | FC <10 | >10 | <10 | <10 | 140 | <10 | <10 | 10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | 10 |
| | | ENT 10 | 2 | 6 | <2 | 36 | 26 | 2 | 2 | 4 | <2 | <2 | <2 | <2 | <2 | <2 | 4 | <2 | <2 | <2 |
| BNB17 | 10th Street Beach | TC 80 | <10 | 20 | 10 | 6000 | 20 | 10 | >20 | 10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| | | FC <10 | <10 | <10 | <10 | 220 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| | | ENT 2 | 2 | 2 | <2 | 32 | <2 | <2 | 4 | 2 | 20 | <2 | 10 | <2 | 2 | 2 | <2 | 8 | <2 | <2 |
| BNB18 | Alvarado/ Bay Isle Beach | TC 10 | 40 | 10 | 20 | 13000 | 20 | 10 | <200 | 10 | 100 | >10 | <10 | >50 | 20 | <10 | >60 | 10 | <10 | >10 |
| | | FC <10 | <10 | 10 | <10 | 290 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| | | ENT 4 | 22 | 8 | <2 | 100 | 4 | 10 | 20 | <2 | 10 | 10 | <2 | 110 | 10 | 2 | 24 | <2 | 2 | 4 |
| BNB22 | N Street Beach | TC 10 | 30 | 20 | <10 | 920 | 20 | 20 | 50 | <10 | 30 | <10 | <10 | <10 | 220 | <10 | 30 | <10 | <10 | 30 |
| | | FC <10 | <10 | <10 | <10 | 10 | 10 | 20 | <10 | <10 | <10 | <10 | <10 | <10 | 130 | <10 | <10 | <10 | <10 | 20 |
| | | ENT 2 | <2 | <2 | <2 | 2 | 28 | <2 | 4 | <2 | 4 | <2 | 2 | 2 | 54 | 2 | <2 | <2 | 2 | <2 |
| BNB31 | Garnet Avenue Beach | TC >440 | 40 | 30 | 70 | 8000 | 40 | 190 | >70 | 10 | >270 | <10 | 30 | 150 | >30 | <10 | >20 | >20 | >20 | >20 |
| | | FC 200 | <10 | 10 | 10 | 180 | 20 | <10 | <10 | <10 | 110 | 20 | <10 | <10 | <10 | <10 | 40 | 10 | <10 | 10 |
| | | ENT 10 | 2 | 4 | 26 | 54 | 2 | 38 | <2 | 74 | 6 | 10 | 130 | 6 | 58 | 28 | 120 | 4 | 10 | 94 |
| BNB03 | Ruby Avenue Beach | TC >310 | <10 | 10 | <10 | 6600 | <10 | 50 | >30 | 30 | <10 | 10 | 70 | 20 | 10 | 30 | >20 | >20 | <10 | <10 |
| | | FC <10 | <10 | <10 | <10 | 95 | <10 | <10 | 10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| | | ENT 20 | 26 | <2 | <2 | 32 | 6 | 2 | 10 | <2 | 6 | 2 | <2 | 2 | <2 | 6 | 2 | <2 | 2 | <2 |
| BNB20 | Sapphire Avenue Beach | TC 10 | <10 | 40 | 10 | 700 | >50 | >40 | 120 | >100 | NS | 10 | >30 | >140 | >20 | >20 | >30 | >10 | >20 | >30 |
| | | FC <10 | <10 | <10 | <10 | 30 | <10 | 10 | <10 | 10 | NS | 10 | 20 | <10 | 10 | 10 | 20 | <10 | 10 | <10 |
| | | ENT <2 | 2 | 4 | 8 | 10 | 10 | 20 | 4 | NS | 4 | 66 | 24 | 265 | 8 | 350 | 2 | 8 | 8 | 8 |
| BNB34 | Grand Canal | TC 120 | 290 | <10 | >20 | 4000 | >310 | 70 | 460 | 40 | 100 | >20 | 320 | 10 | >130 | 30 | >20 | 100 | 80 | 40 |
| | | FC <10 | 160 | <10 | <10 | 100 | 80 | <10 | 340 | 60 | 95 | <10 | 10 | <10 | 70 | <10 | <10 | 20 | <10 | <10 |
| | | ENT 2 | 24 | 6 | 36 | 22 | 22 | <2 | 20 | 2 | 4 | <2 | 2 | 2 | <2 | 2 | 20 | <2 | 10 | <2 |
| BNB21 | Abalone Avenue Beach | TC 170 | 10 | 20 | <10 | 670 | 50 | >270 | >50 | >260 | 10 | 10 | 20 | 40 | >200 | >120 | <10 | 210 | 10 | 80 |
| | | FC 20 | <10 | <10 | 10 | 110 | <10 | <10 | 10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | 60 | 10 | 10 |
| | | ENT 4 | 2 | 6 | 6 | 20 | 2 | 8 | 20 | 36 | 10 | <2 | 2 | 4 | 90 | 34 | 4 | 20 | <2 | 2 |
| BNB01 | Park Avenue Beach | TC 110 | 30 | <10 | 20 | 6000 | 70 | 20 | 70 | <10 | 10 | 80 | <10 | 10 | 10 | <10 | >10 | <10 | 10 | 80 |
| | | FC <10 | <10 | 10 | <10 | 95 | 10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| | | ENT 8 | 2 | 2 | <2 | 34 | 10 | <2 | 2 | 2 | <2 | <2 | <2 | 2 | 2 | 2 | 2 | 2 | <2 | 2 |
| BNB02 | Onyx Avenue Beach | TC >240 | <10 | 20 | <10 | 5000 | 20 | <10 | >10 | 10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | 20 | 10 |
| | | FC 10 | <10 | 20 | <10 | 100 | 10 | <10 | 10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| | | ENT 10 | 520 | 10 | <2 | 34 | 10 | 2 | 20 | <2 | 2 | <2 | <2 | 10 | <2 | 2 | 2 | 10 | 2 | <2 |
| BNB29 | Promontory Point Channel | TC <10 | 60 | <10 | <10 | 800 | 10 | 10 | >10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | 10 | <10 | <10 |
| | | FC <10 | <10 | <10 | <10 | 20 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| | | ENT <2 | 2 | 2 | <2 | 8 | <2 | 2 | 26 | <2 | 2 | <2 | <2 | 2 | <2 | 2 | <2 | 4 | <2 | <2 |
| BNB33 | Bayside Drive Beach | TC 30 | 110 | 30 | >80 | 730 | >140 | >50 | >210 | >100 | >10 | 40 | >10 | 8000 | >110 | >220 | >40000 | >10 | >30 | >90 |
| | | FC <10 | 40 | 20 | <10 | 20 | 10 | <10 | 50 | 10 | <10 | 20 | <10 | 7800 | <10 | 95 | 30 | 20 | 30 | |

Total Coliform (TC), Fecal Coliform (FC),
Enterococcus (\leq NT) Colony Forming Units/100 ml Sample

| DATE | 2/18 | 2/19 | 2/25 | 2/26 | 3/4 | 3/5 | 3/11 | 3/12 | 3/18 | 3/19 | 3/25 | 3/26 | 4/1 | 4/2 | 4/8 | 4/9 | 4/15 | 4/16 | 4/22 | 4/23 | 4/29 | 4/30 | 5/6 | 5/7 | 5/13 | 5/14 | 5/20 | 5/21 | 5/27 | 5/28 | 6/3 | 6/4 |
|-----------------------|---------------------|------|------|------|------|-----|------|------|------|------|------|------|------|------|-----|-----|------|------|------|------|------|------|-----|-----|------|------|------|------|------|------|-----|-----|
| Location/Site | RAIN | | | | RAIN | | | | RAIN | | | | RAIN | | | | RAIN | | | | RAIN | | | | RAIN | | | | RAIN | | | |
| Bolsa Chica Beach | TC 50 | <17 | 270 | <17 | <17 | <17 | <17 | 17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | 33 | <17 | 33 | <17 | |
| Bolsa Chica Reserve | ENT 39N | 4 | 8 | <2 | 2 | 2 | 2 | 2 | 2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | |
| Bluffs | TC 27N | 17 | 83 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | <17 |
| 17th Street | TC 17 | <17 | 83 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 |
| 21N | FC <17 | 118 | 24 | 4 | 6 | 8 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 |
| Beach Blvd. | TC 17 | 33 | 130 | 67 | 50 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 |
| 12N | FC 17 | 33 | 22 | 48 | 6 | 4 | 12 | 4 | 12 | 4 | 12 | 4 | 12 | 4 | 12 | 4 | 12 | 4 | 12 | 4 | 12 | 4 | 12 | 4 | 12 | 4 | 12 | 4 | 12 | 4 | 12 | |
| Jacks Snack Bar | TC 17 | <17 | 50 | 17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | |
| SCE Plant | TC <17 | 17 | <17 | 180 | 17 | 33 | <17 | 33 | <17 | 33 | <17 | 33 | <17 | 33 | <17 | 33 | <17 | 33 | <17 | 33 | <17 | 33 | <17 | 33 | <17 | 33 | <17 | 33 | <17 | 33 | <17 | |
| 9N | FC <17 | 83 | <17 | 150 | <17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | |
| ENT 6 | 10 | 10 | 14 | 4 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | |
| Magnolia Street | TC 4 | 6 | 20 | 82 | 12 | 18 | 2 | 4 | <2 | 38 | 12 | 22 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| River Mouth | TC 220 | 230 | 33 | 200 | 17 | 17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | |
| 0 | ENT 2 | 334 | 64 | 132 | 4 | 12 | 10 | 10 | 8 | 26 | 12 | 102 | 14 | 8 | <2 | 2 | <2 | 14 | 8 | 4 | 16 | >400 | 2 | <2 | 12 | 40 | <2 | 20 | 50 | 20 | <2 | |
| Brookhurst | TC 33 | 120 | 83 | 480 | 300 | 130 | 400 | 130 | 17 | 280 | 17 | 2000 | 1100 | 1000 | 50 | 150 | 150 | 7000 | 33 | 50 | 620 | 33 | <17 | <17 | 350 | 1600 | 33 | 17 | <17 | 17 | 33 | |
| 3N | FC 17 | 67 | 83 | 300 | 200 | 67 | 170 | 83 | 50 | 170 | <17 | 1900 | 1200 | 1200 | <17 | 170 | 220 | 5400 | 50 | 170 | 500 | <17 | <17 | <17 | 350 | 920 | <17 | <17 | <17 | <17 | <17 | |
| Santa Ana River Mouth | ENT 102 | 48 | 72 | 192 | 60 | 8 | 54 | 110 | 26 | 26 | 2 | 216 | >400 | 16 | 4 | 12 | 40 | >400 | 6 | 76 | 182 | 4 | 38 | 18 | 82 | >400 | 10 | 8 | <2 | 6 | 6 | |
| ENT 6 | 20 | 10 | 4 | 34 | 36 | 38 | 6 | >400 | 14 | 28 | 26 | <2 | 2 | 48 | 6 | 56 | 2 | 68 | 6 | 6 | 4 | 40 | <2 | 4 | 2 | 2 | 8 | 4 | 2 | 2 | 8 | |
| Orange Street | TC 3S | 50 | <17 | 400 | 67 | 50 | 67 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | |
| 52nd/53rd Street | TC 9S | 48 | 33 | <17 | 200 | <17 | 17 | 100 | 17 | 100 | 17 | 100 | 17 | 100 | 17 | 100 | 17 | 100 | 17 | 100 | 17 | 100 | 17 | 100 | 17 | 100 | 17 | 100 | 17 | 100 | 17 | 100 |
| 38th Street | TC 15th/16th Street | 17 | <17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 |
| ENT 6S | ENT 2 | 6 | 8 | 50 | <2 | 6 | 84 | 14 | 14 | 14 | 58 | 10 | <2 | 32 | 16 | <2 | 4 | <2 | 4 | <2 | 4 | <2 | 4 | <2 | 4 | <2 | 4 | <2 | 4 | <2 | 4 | |
| The Wedge | TC 27S | <17 | 17 | <17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 |
| Balboa Pier | TC 21S | <17 | 33 | <17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 |
| Corona Del Mar Beach | TC 29S | <2 | 54 | <2 | 14 | 8 | 44 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Crystal Cove | TC 39S | <17 | 17 | <17 | 17 | 17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 | <17 |
| ENT | <2 | 2 | 2 | 2 | 2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | |

Project Update

■ Street Sweeping:

- 164 HOAs – 2/3 have public streets and are swept by the City
- Remaining 1/3 – we contacted the large associations, i.e. Newport Coast, One Ford Rd and Big Canyon. All have street sweeping programs.



■ Catch Basins:

- Total 3,983 (3,233 City; approx. 750 private)
- City cleans 100% annually; estimated 10-20% of private are cleaned.



 **PublicWorks**
Integrity, Accountability, Service, Trust



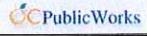
Water Quality/Coastal Tidelands



June 12, 2014

Overview

- Orange County Stormwater Program
- Stormwater Permits and Urban Runoff
- Concerns with Proposed Permit
- Questions

Orange County Stormwater Program

- 24 years of program implementation (MS4 permits since 1990)
- County and City staff bring 100's of years of collective water quality experience
- Nationally recognized consultant expertise has assisted in all areas of program development
- Highly acclaimed program elements:
 - Land Development – OC Engineering Council Engineering Project Achievement Award 2012
 - Public Education – CASQA Outstanding Outreach and Media Project



OC Public Works

Stormwater Permits

The federal Clean Water Act requires that stormwater permits for discharges from municipal storm sewers:

- may be issued on a system- or jurisdiction-wide basis;
- shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers; and
- shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.



OC Public Works

MS4 Permit Evolution

Existing program and...

- ◆ Increased accountability
- ◆ Expansion of local regulatory oversight
- ◆ Transformation of land development requirements
- ◆ Additional mandates - TMDL integration

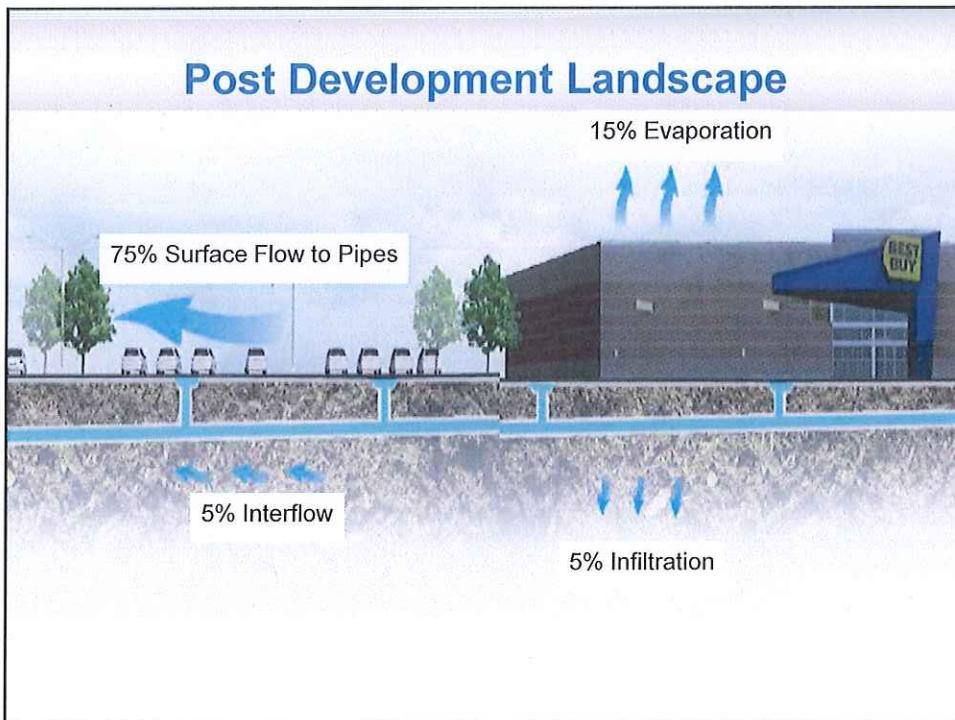
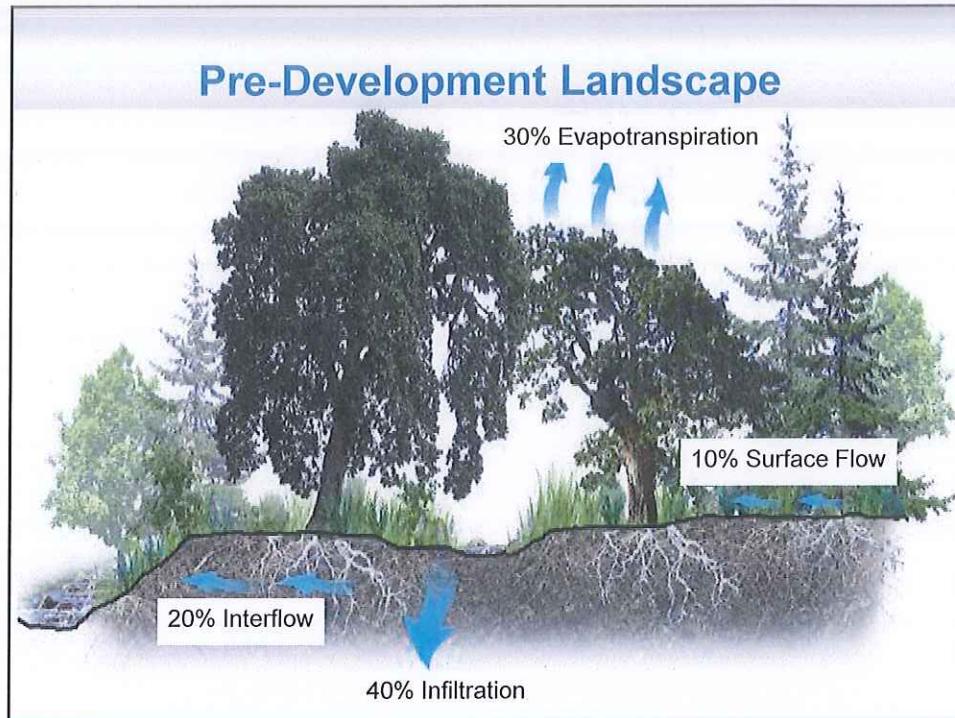


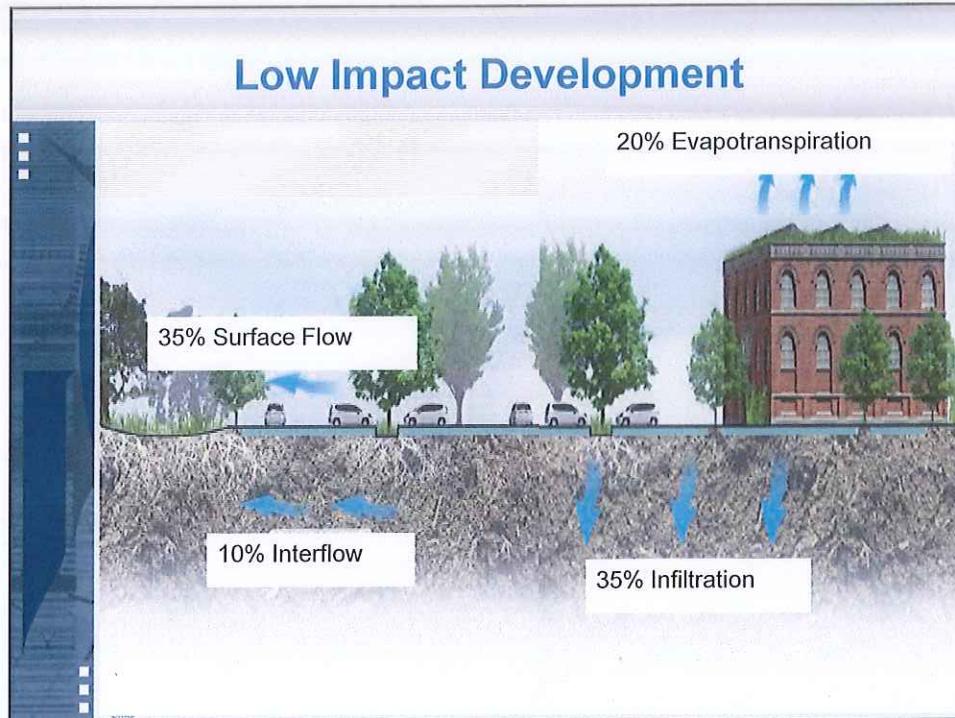
Urban Runoff

There are four interrelated but separable effects of land-use changes on the hydrology of an area: changes in peak flow characteristics, changes in total runoff, changes in quality of water, and changes in the hydrologic amenities.

Luna Leopold, 1968







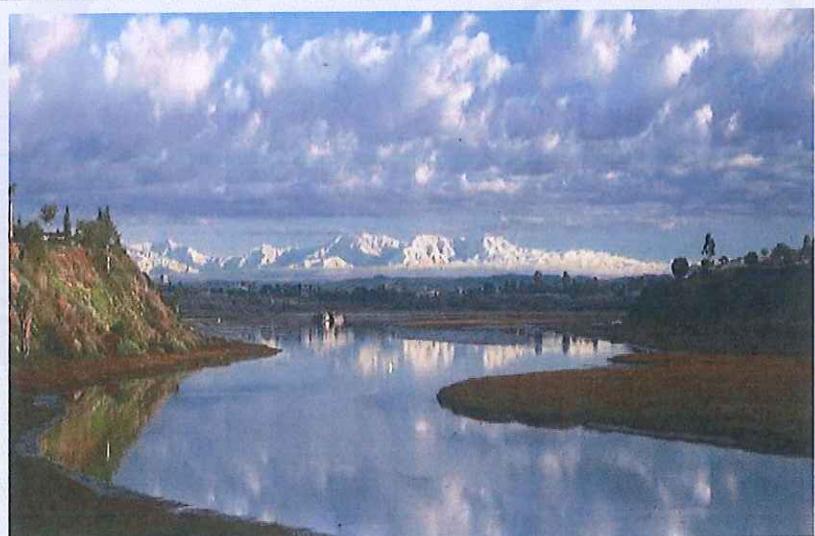
- ## Policy Concerns
- No recognition of progress and successes
 - Needs justification for new requirements
 - Must recognize MEP
 - Must continue current Model WQMP/TGD
 - Needs to remove "prescription" that is counter-productive to adaptive management
-  

1. Recognize Progress: Bacteria

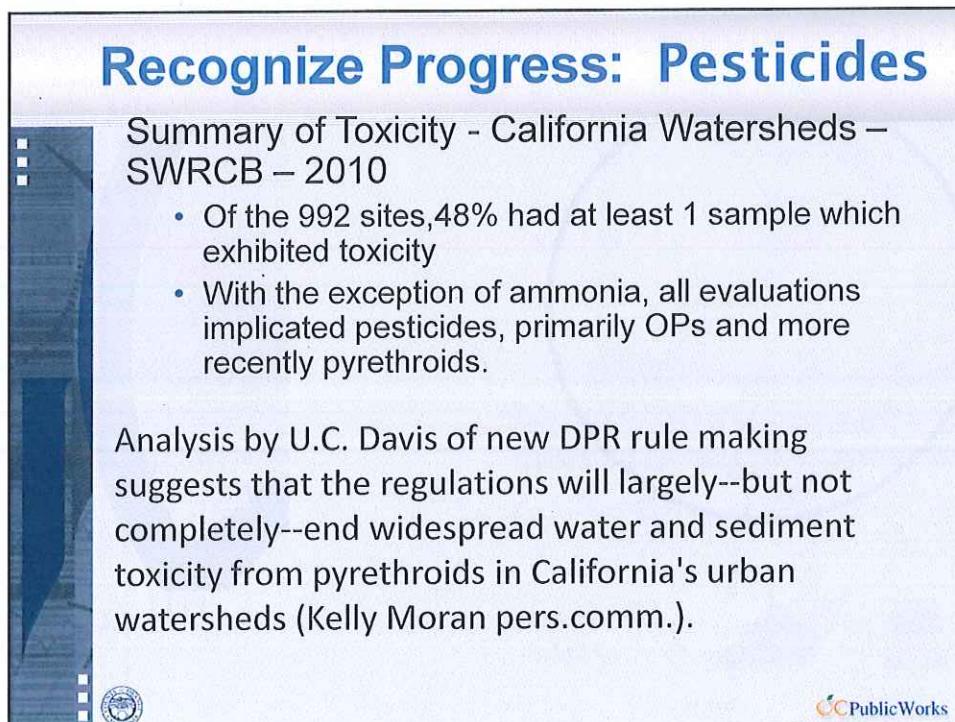
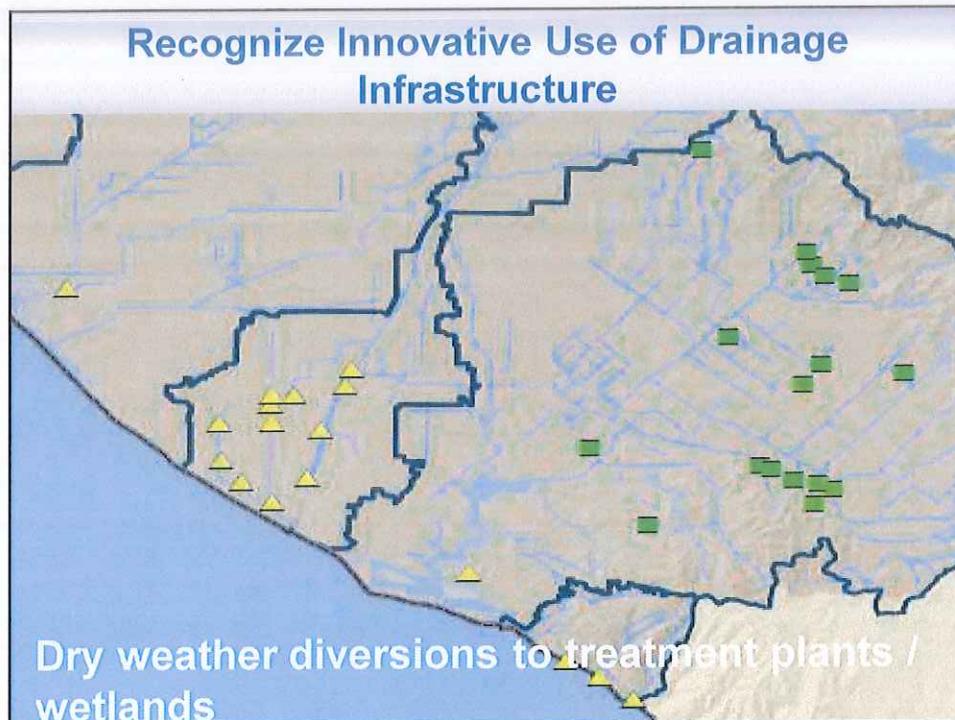


OC Public Works

Recognize Progress : Nutrients



OC Public Works



Recognize Progress: Copper

- Principal sources of copper in urban runoff: **vehicle braking**, architectural copper and ornamental ponds/swimming pools.
- SB346 (Kehoe) 2010

Vehicle Brakepads

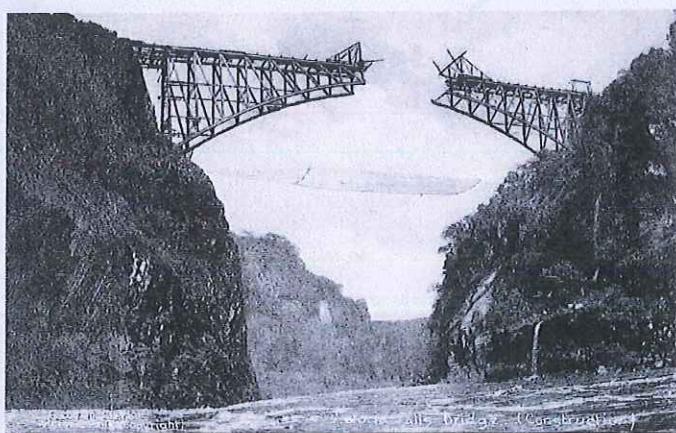
2021 – No more than 5% Cu by weight

2025 – No more than 0.5% Cu by weight



OC Public Works

2. Directives Require Findings



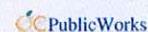
Findings must “bridge the analytic gap between the raw evidence and ultimate decision or order.”



OC Public Works

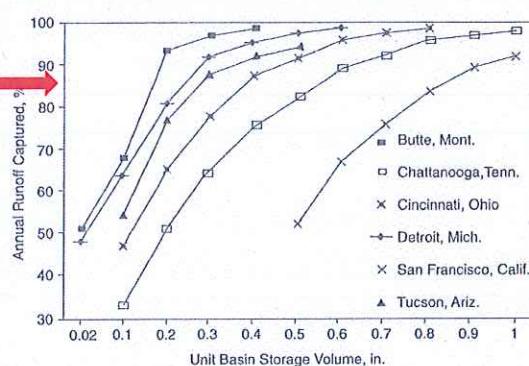
Examples

- ➔ XIV.C. Requires cleaning and inspection of underground drains
- ➔ XII. Requires changes to sizing factors and other performance standards
 - XII.B.2. Requires all development projects to be categorized as "Priority" or "Non-Priority"
- ➔ IX.B.1. Maintains current industrial inspection frequencies
- ➔ X. Maintains current commercial inspection frequencies



3. "Maximum Extent Practicable" Requires Thresholds of Effectiveness

MEP
Benefit



COST

The 80th percentile runoff event is now considered cost effective and is the design event that achieves the MEP definition under the Clean Water Act – WEF/ASCE, 1998



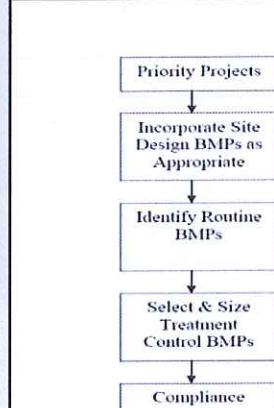
Examples

- VIII. Requires inspection of all construction activity
- IX and X. Maintains existing inspection frequencies
- IV.C. Requires cleaning and inspection of underground drains
- XII.B.2. Requires all development projects to be categorized as “Priority” or “Non-Priority”
- XII.F.4 & G.5 Requires mitigation of infiltration constraints

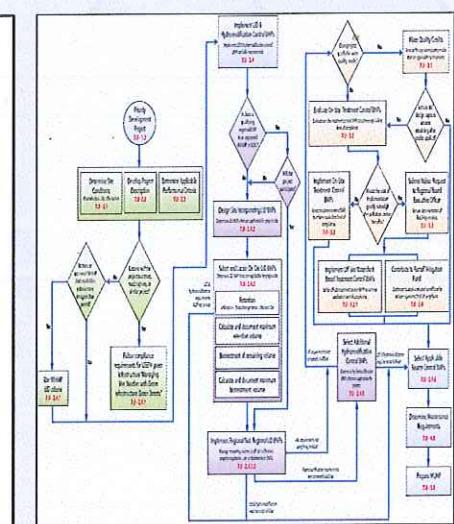


4. Land Development: No Case For Change

2003-2011



2011-





Contributed by Gene Estrada, City of Orange



Contributed by Gene Estrada, City of Orange



Contributed by Gene Estrada, City of Orange

Land Development: No Case For Change

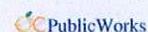
- ➔ Product of 2 year stakeholder development process
- ➔ \$1.5m development costs
- ➔ Only 2 years into implementation (Less than 1 year in South Orange County)
- ➔ No evaluation of LID BMP performance
- ➔ No technical justification for proposed changes - which would be very costly
- ➔ No findings in permit



OC PublicWorks

Examples

- ➔ XII. Changes BMP Lexicon
- ➔ XII.A. Creates new requirements for General Plans
- ➔ XII.B.1 50 Days for Implementation
- ➔ XII.B.2 “Priority” or “Non-Priority”
- ➔ XII.C.6 Prescription of mechanisms
- ➔ XII.C.10 Recordation of Project WQMPs
- ➔ X.D.1.c 80% capture
- ➔ XII.D.3 48 Hour Drawdown time
- ➔ XII.D.8 Requires entry on to private property
- ➔ XII.E.1 BMPs require peer reviewed performance data
- ➔ XII.F.4 & G.5 Requires mitigation of infiltration constraints

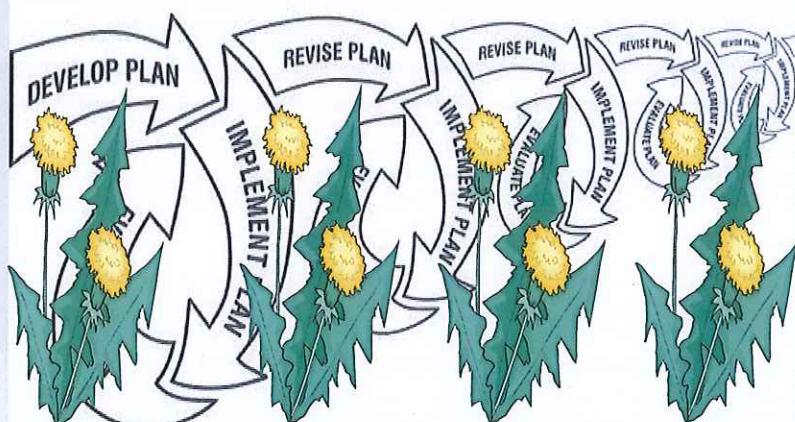


Examples

- ➔ XII.G.1.d. 1.5x Biotreatment Sizing
- ➔ XII.I.2. 10' Groundwater Separation
- ➔ XII.N.1.b. No hydromodification exemption for engineered channels
- ➔ XII.N.2. Hydromodification performance standard is changed



5. Process Focus is Counterproductive



OC PublicWorks

Examples

- ➔ VII.E.3.a. Requires Executive Officer approval of individual drain inlet screen replacement
- ➔ XIV.C. Requires cleaning and inspection of underground drains
- ➔ XII.B.2. Requires all development projects to be categorized as "Priority" or "Non-Priority"
- ➔ XII.E.1 BMPs require peer reviewed performance data
- ➔ Requires quarterly update of existing development inventories

OC PublicWorks

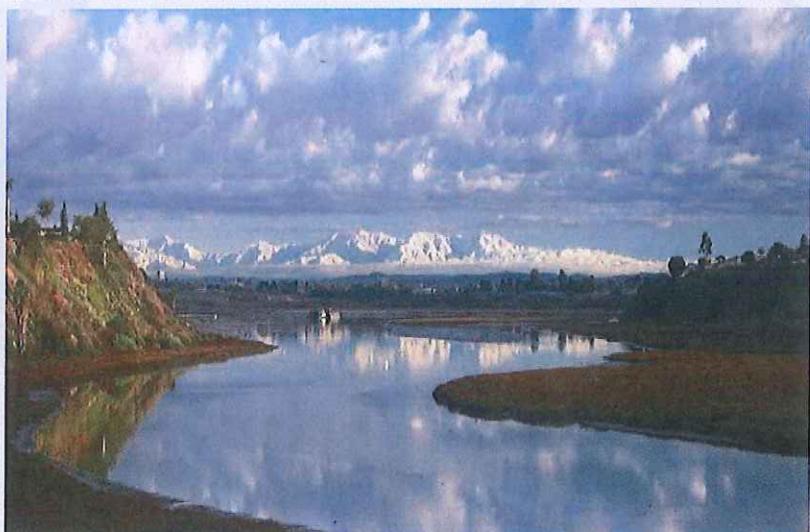
In Conclusion

Revise Permit to:

- Recognize progress and successes
- Provide additional findings
- Recognize MEP and thresholds of significance
- Continue Model WQMP/TGD
- Remove "prescription" that is counter-productive



Questions



Selenium Reduction Projects in Newport Bay Watershed



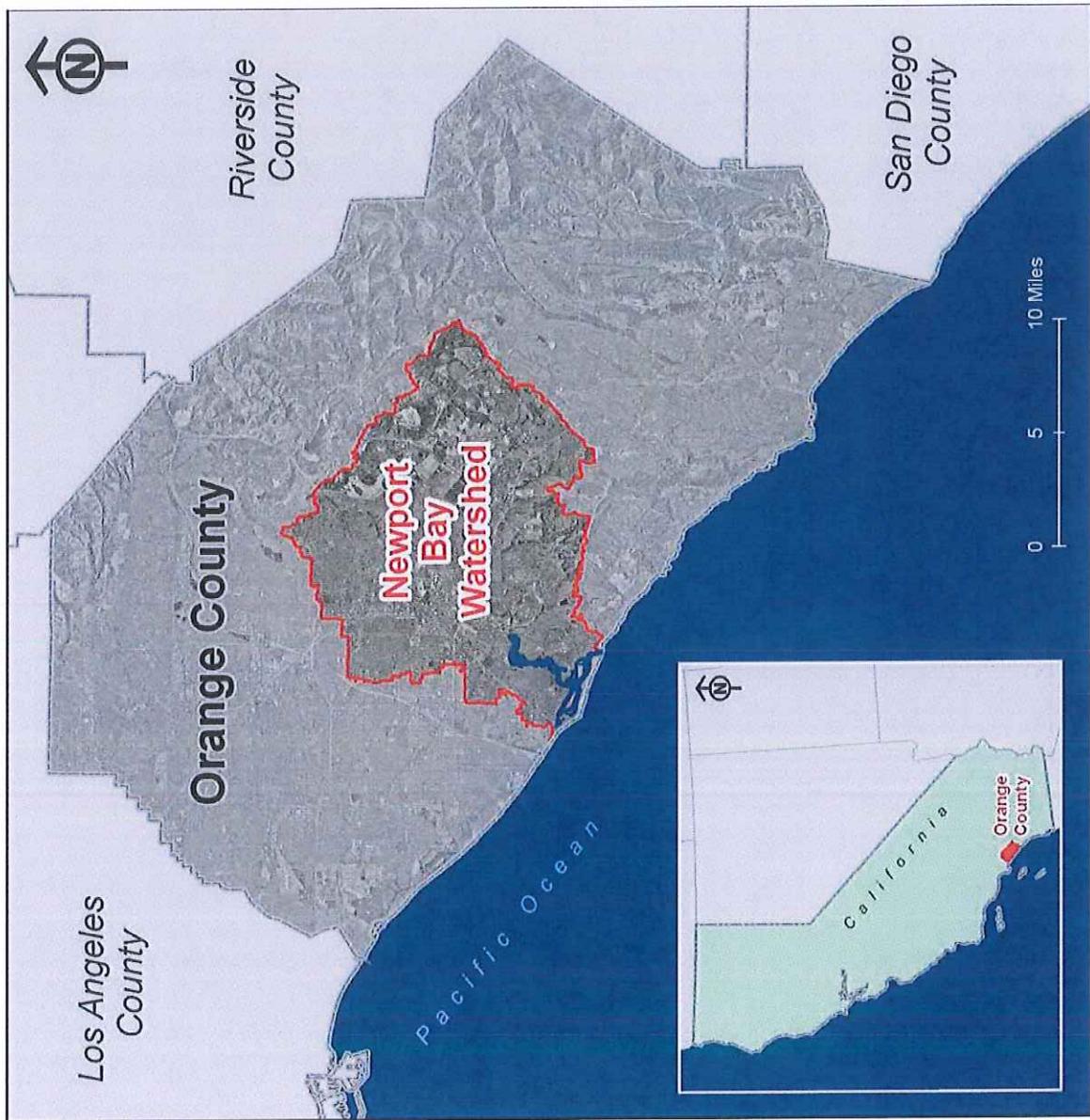
Mary Anne Skorpanich

Deputy Director
OC Public Works

June 12, 2014



Watershed Overview



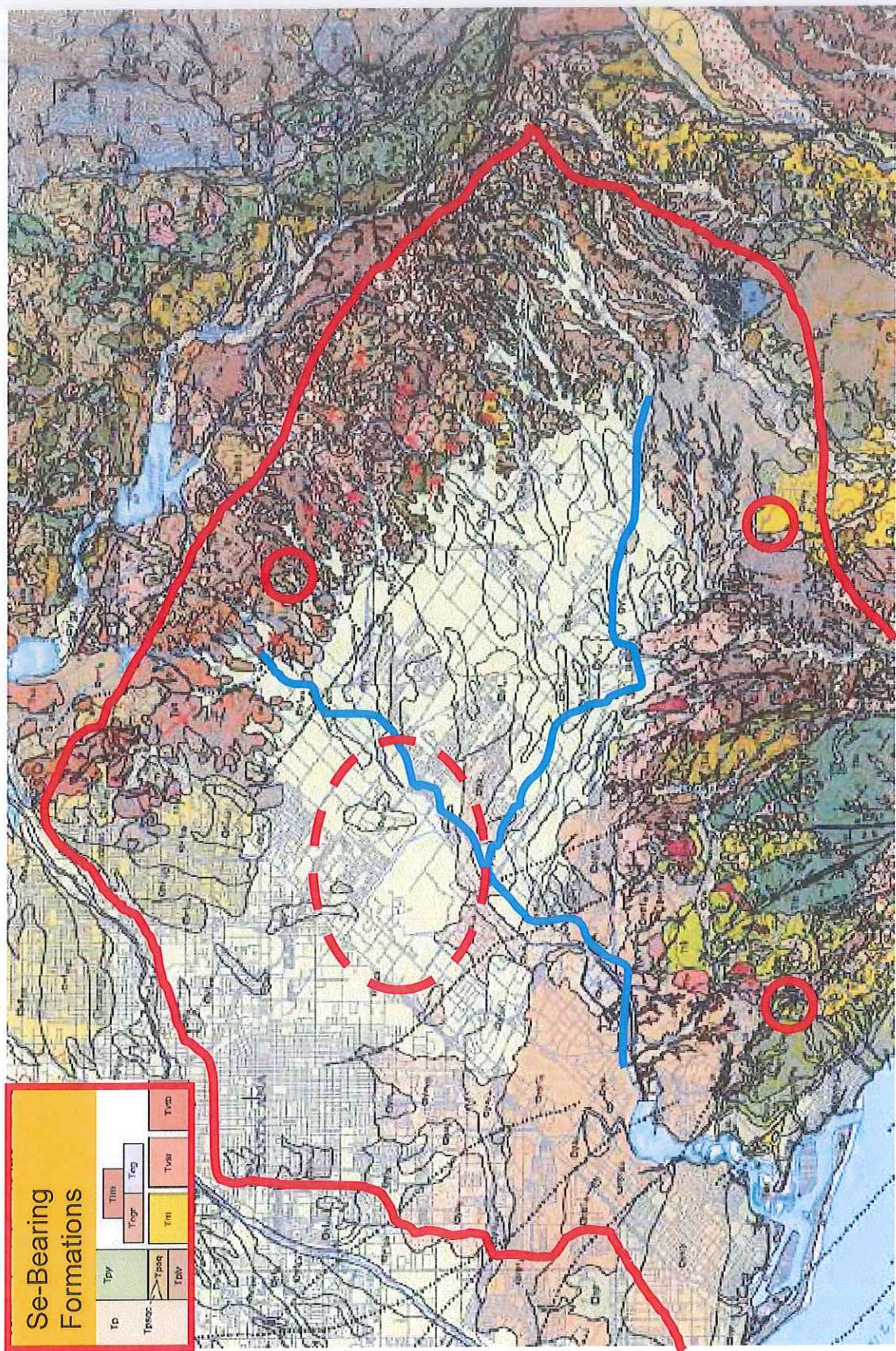
→ 152 sq.
miles

→ >75% urban

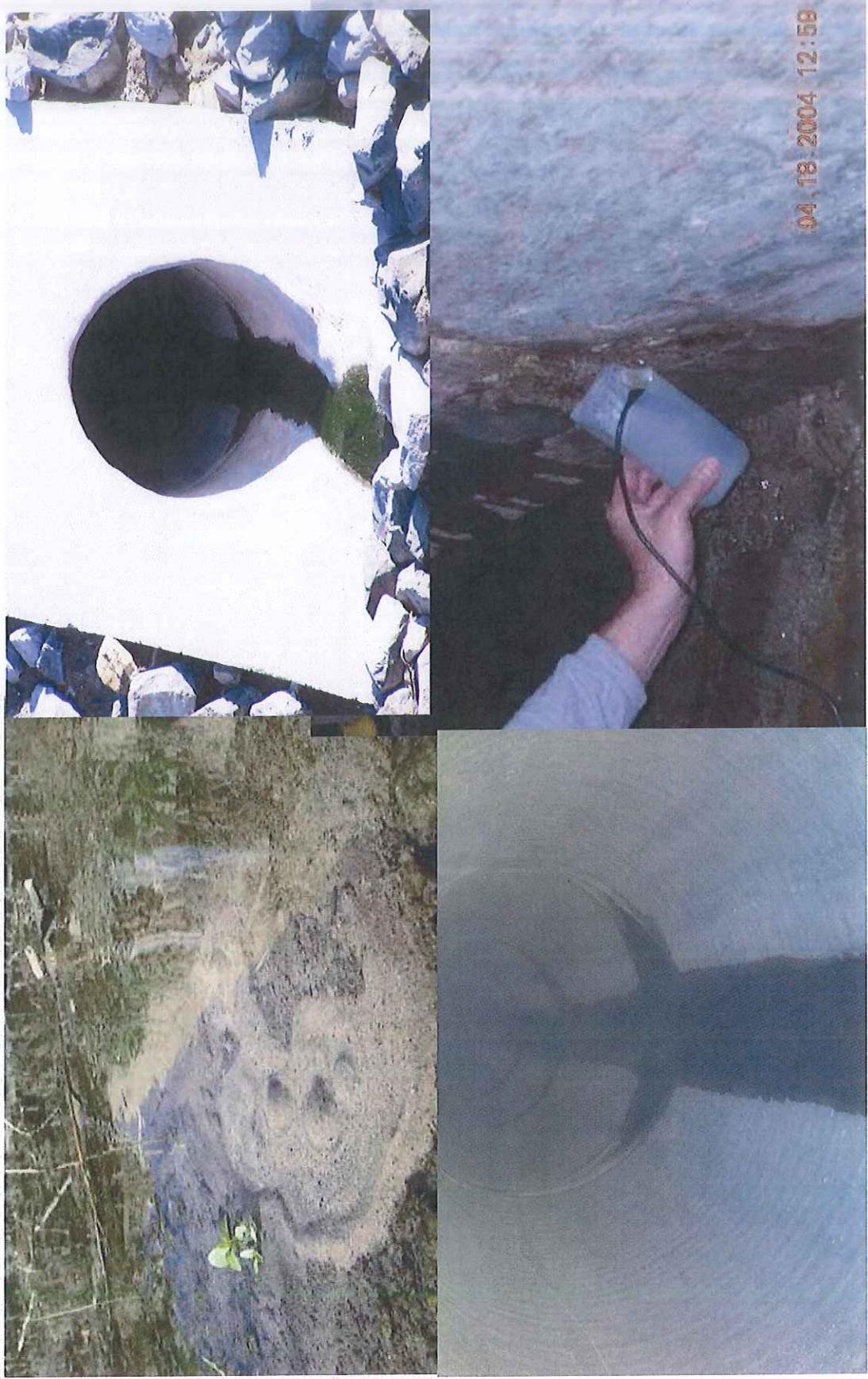
→ 700,000
population

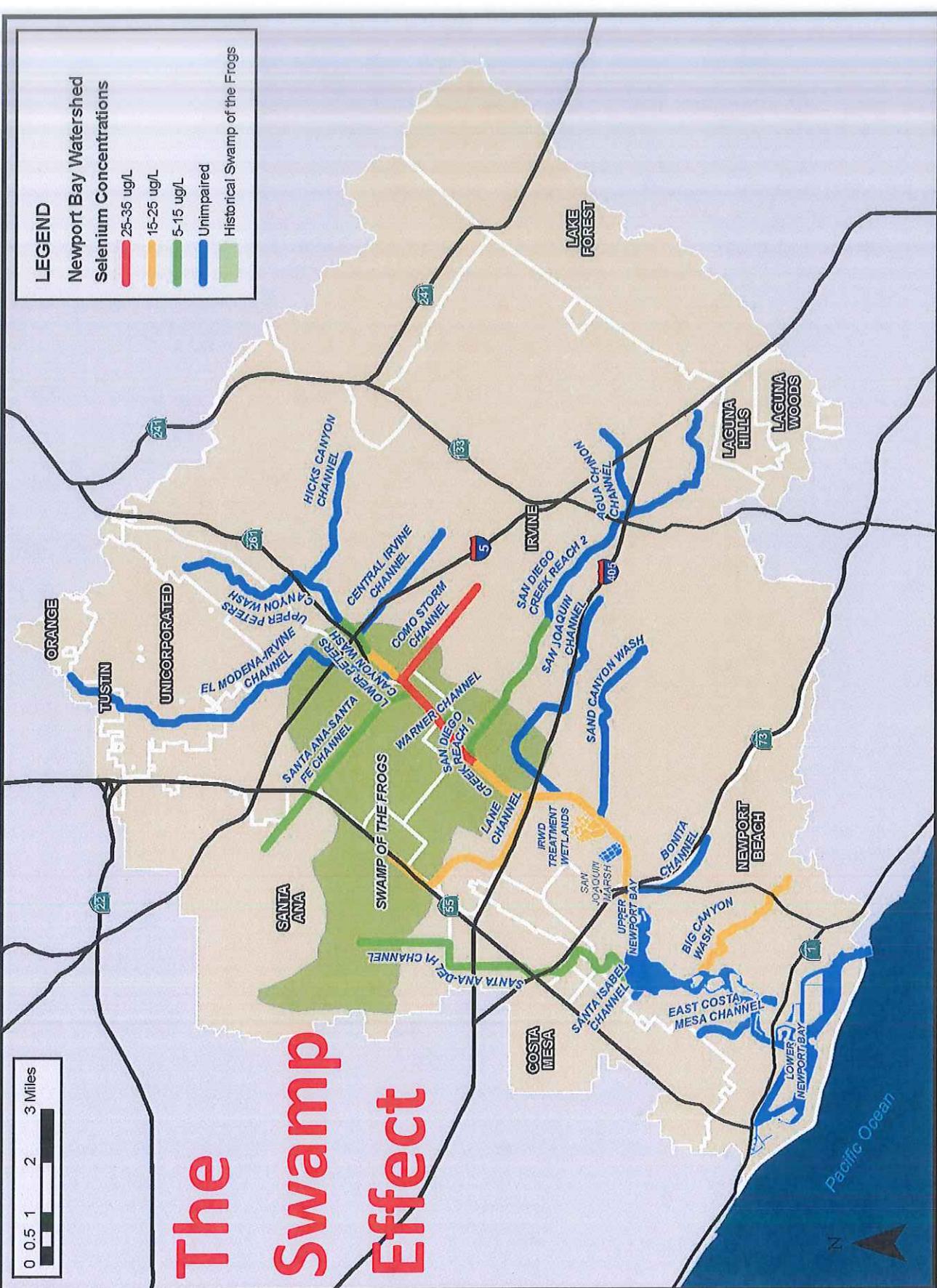
→ 925 channel
& storm
drain miles

Geological Sources and Hot Spots (USGS 2006)



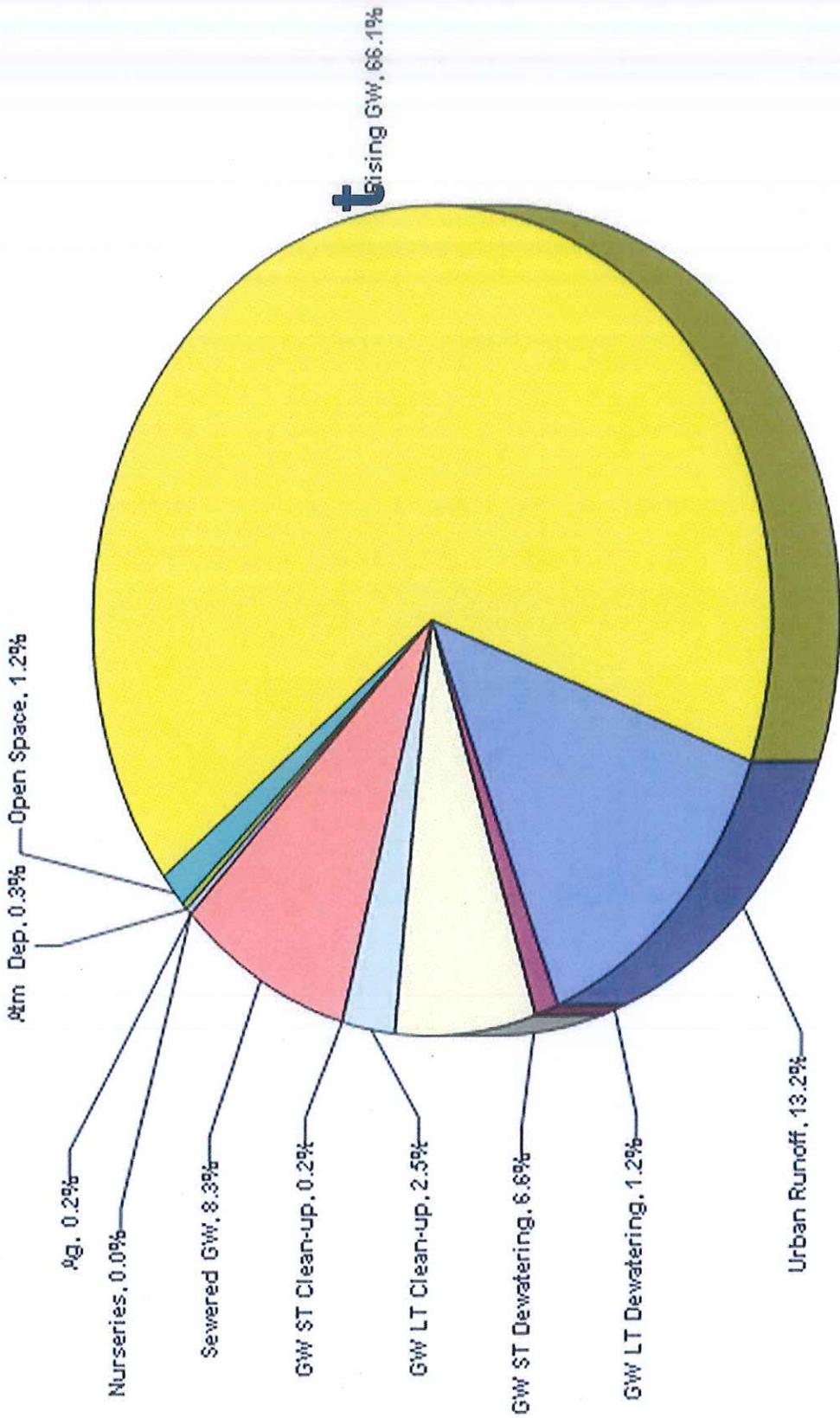
Rising Groundwater





Preponderance of Nonpoint Loads

Figure 7-9. Total Estimated% Load for Selenium in the Newport Bay Watershed



BMP Strategic Plan

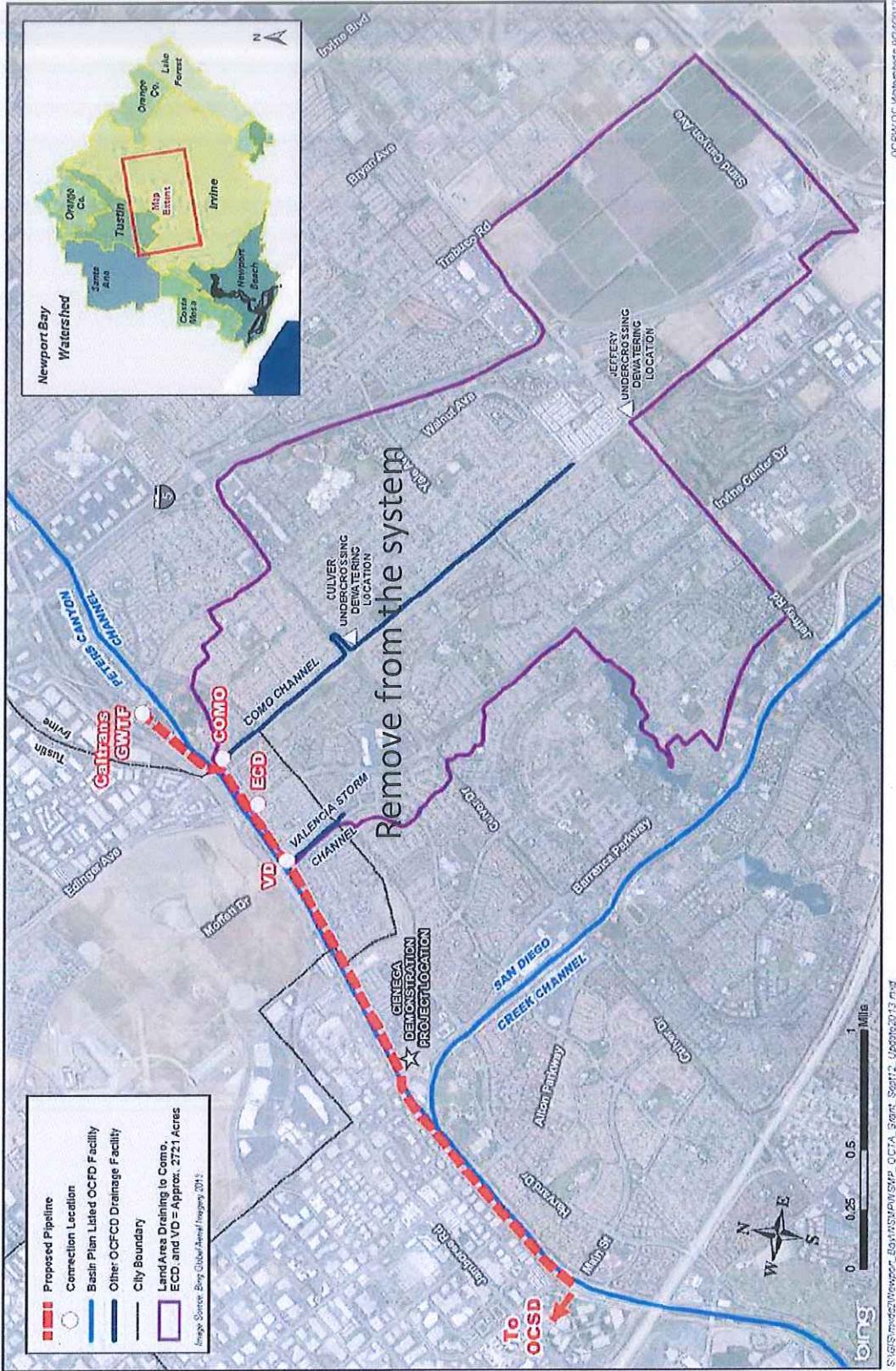
- ➔ Phased, adaptive
- ➔ >\$10M committed funding
- ➔ Significant selenium load reductions
 - San Diego Creek Watershed: ~230 lbs/yr
 - Santa Ana-Delhi Watershed: ~40 lbs/yr
 - Big Canyon Watershed: ~15 lbs/yr

Peters Canyon Pipeline - Project Goals

- ➔ Capture point source discharges containing selenium before they reach receiving waters
- ➔ Capture non-point sources flows containing selenium
- ➔ Provide offset credits for point source discharges elsewhere
- ➔ Remove nutrients, bacteria, pesticides, etc.



Peters Canyon Pipeline Project



OCPW OC Waterworks 9/24/2017

StartFromOCWww.ocpw.org/NSP/WSMP_OCTA_Short_Sectn2_Updated2013.mxd

Peters Canyon Pipeline Partners

- City of Irvine
- City of Tustin
- OC Flood Control District
- County of Orange
- Irvine Ranch Water District
- Caltrans

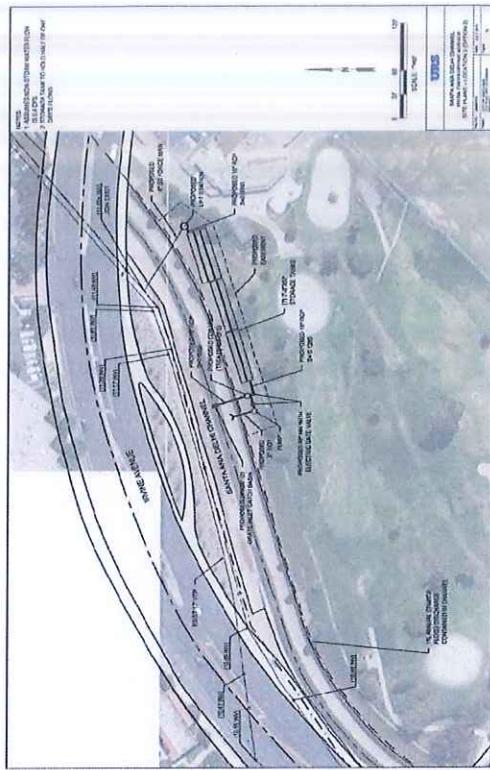
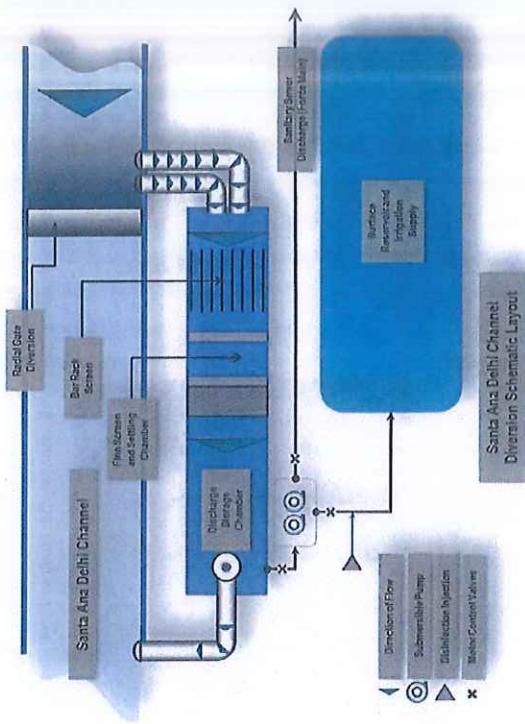


Peters Canyon Pipeline Project Facts

- \$8.7M capital cost
- 3 miles of pipeline
- 230 pounds/year selenium removal
 - >100 pounds nonpoint source loads
- 20+ years operation commitment
- Diverted water to be reused

Santa Ana-Delhi Pipeline Project

- \$5.7M capital cost
- 2 miles of pipeline
- ~40 pounds/year selenium removal
- 20+ years operation commitment
- Diverted water to be reused



Big Canyon Wash Selenium Management Plan

→ Expected load removal: ~10 lbs/yr

→ Combination of:

- Diversions to sewer
- modifications to golf course ponds
- infrastructure

Watershed Monitoring

→ Water column monitoring

- Since 1990s as part of NPDES monitoring

→ Biota monitoring since 2010

- Fish tissue:

- Sunfish and bass (including blue gills)
 - Other most sensitive & exposed fish species
- Bird eggs:
- Surrogate species for T&E species
 - Grebes, coots, stilts, avocet, skimmer
- One of few such programs in the nation

Biota Monitoring



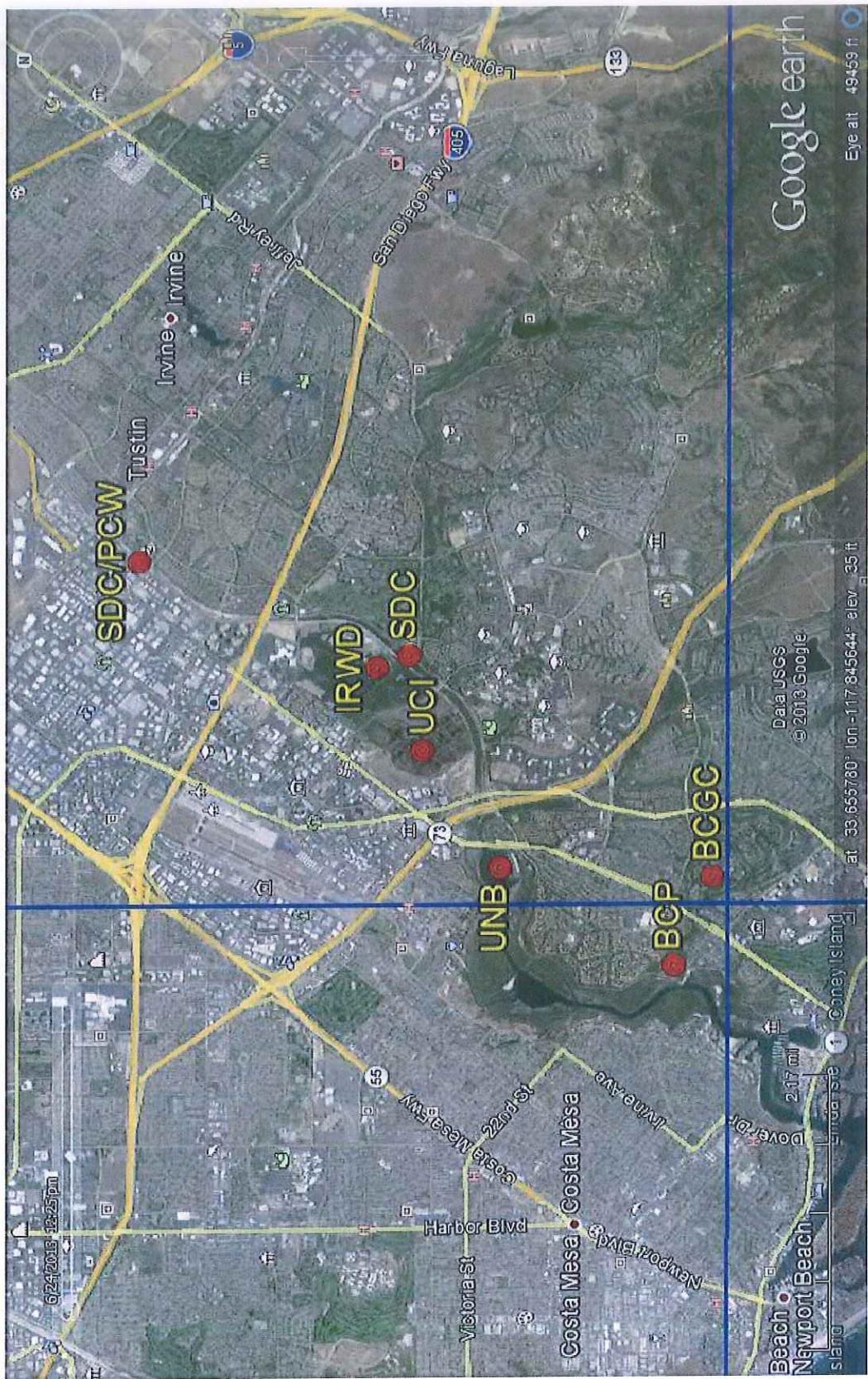


For more information:

www.ocnsmmp.com

www.ocwatersheds.com

Biota Monitoring Locations



Regulatory Challenges

- ➔ No proven and practical selenium treatment technology
- ➔ True source control will dry up the channels
- ➔ Unlimited selenium source requires treatment to perpetuity
- ➔ The ‘natural condition’ paradox
 - Channels built for flood control purposes
 - Nuisance flow + rising groundwater = habitat
- ➔ Extended compliance schedule is needed to allow time for the issue

Summary

- Newport Bay Watershed is an urbanized, highly modified watershed
- Geological origin and nonpoint source selenium poses management challenges
- Significant commitments are made on projects throughout the watershed
- Watershed monitoring provides valuable information for watershed and beyond
- Extended compliance schedule is needed to allow time to tackle complex selenium issues